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PowerVerter® Ultra Compact

DC-to-AC Power Inverters

PV 140, PV 300

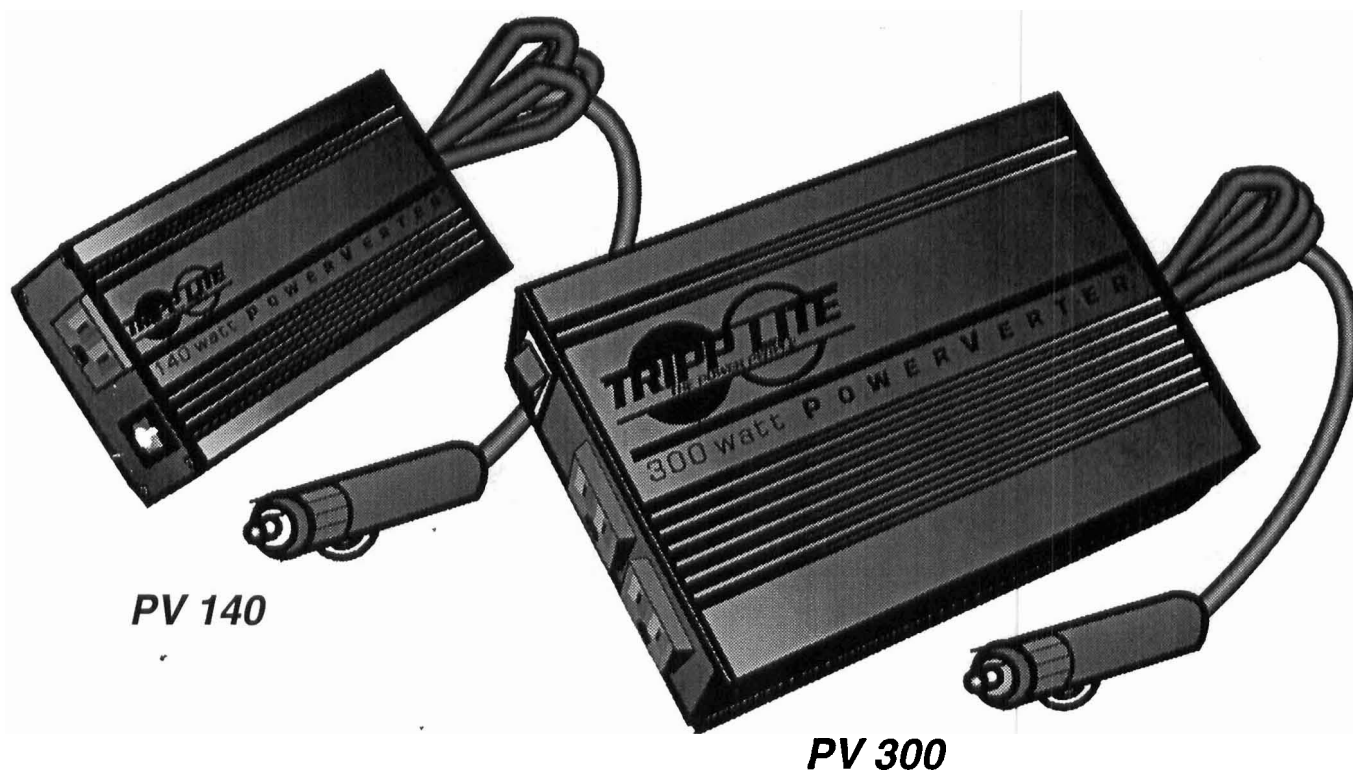


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Please save these instructions and thoroughly read the Safety (page 3) and Operation (page 5) sections before operating your PowerVerter. Be sure to save the original carton and Styrofoam inserts. If you require service, your warranty may be voided if the PowerVerter is sent back to Tripp Lite in improper packaging.

1 • INTRODUCTION

1.1 Applications

Congratulations! Your new Tripp Lite PowerVerter Ultra Compact DC-to-AC Inverter will give you years of reliable, carefree service.

PowerVerter Inverters give you access to AC power wherever and whenever you need it. They convert Direct Current (DC) electricity from a battery to Alternating Current (AC) electricity which is the standard utility power you find at home. Your PowerVerter Inverter simply plugs into the cigarette lighter socket of any vehicle to run a variety of office and household appliances:

- *Laptop Computers* • *TVs* • *Game Systems*
- *Fax Machines* • *VCRs* • *Kitchen Equipment*
- *Lamps* • *Stereos* • *Small Power Tools and More!*

1.2 Advanced Features

Design

PowerVerter Ultra Compact's advanced design and production technology packs the power of standard inverters into a lighter, low-profile, metal case. This design eliminates the need for bulky internal transformers.

Low Battery Protection

You'll never run out of battery power with PowerVerter Ultra Compact Inverters. PowerVerter's Low Battery Alarm alerts you to low voltage in your vehicle's battery. The PowerVerter gives you adequate time to safely shut down your connected equipment and the inverter before restarting your vehicle's engine to recharge your battery. If you're not present when the alarm sounds, PowerVerter will automatically shut itself down, preserving your battery. *Note: turn OFF connected equipment before restarting your engine.*

2 • SAFETY

Warning!

Tripp Lite does not recommend the use of any of its Power Inverters in any life support application where a malfunction or failure of a Tripp Lite Power Inverter could cause failure or significantly alter the performance of the life support device. Contact Tripp Lite for further information on this subject.

Warning!

Do not operate your inverter near flammable materials, fumes or gases.

Caution!

Proper cooling is essential when operating your PowerVerter. Provide adequate ventilation and refrain from placing items on or around the PowerVerter during operation. Refrain from placing your PowerVerter near your vehicle's heating vent or in direct sunlight. Keep the case dry at all times. Disconnect the PowerVerter when not in use.

Caution!

The PowerVerter case will get hot (130° - 140° F) after long periods of continuous use. Do not place the PowerVerter near surfaces or materials that will be effected by this level of heat. Use care when handling the case after extended use.

Caution!

Turn OFF connected equipment before starting your engine. DO NOT plug a surge suppressor, line conditioner or UPS system into the AC receptacles of the PowerVerter. If you attach extension cords to the PowerVerter, use grounded, 14-gauge, 3-wire cords, less than 100 feet long.

Caution!

Check the warning labels on battery chargers or adapters before connecting them to your PowerVerter. DO NOT connect battery chargers or adapters with dangerous-voltage warnings. Most battery chargers and adapters, however, are safe for connection, as long as their labels state that their AC-to-DC output voltage is low (30 volts or lower).

3•CONTROLS

1) Illuminated ON/OFF Switch:

Move the switch to ON ("O") to supply power to your connected equipment. This switch will remain illuminated while the PowerVerter is in operation. Move the switch to OFF ("I") to stop power to your connected equipment.

2) AC Outlet(s):

Connect equipment to the PowerVerter's receptacles that are designed to run on 120V AC electric power (computers, fax machines, televisions, etc.). Be sure equipment that is plugged into the PowerVerter has a wattage draw *equal to or less than* the maximum continuous output of the PowerVerter (140 watts maximum for the PV 140 and 300 watts maximum for the PV 300).

3) DC Fuse:

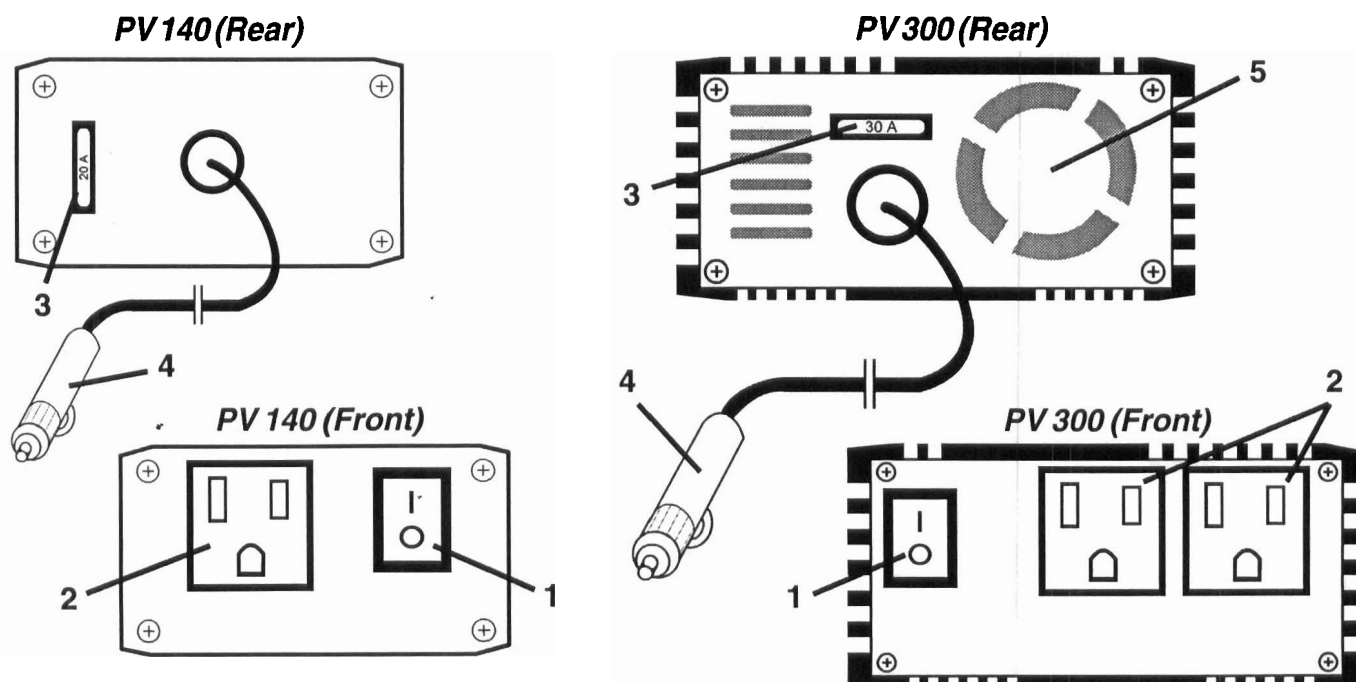
PV 140 and PV 300 models both feature one DC fuse. The fuse protects the PowerVerter against an overload. If too much current is drawn from the AC outlets, or in the event of a major electronic failure, the fuse will blow to protect the PowerVerter's circuitry and your vehicle's battery. If the fuse blows, unplug it and replace it with a standard automotive fuse of equal amperage. *Note: installing non-rated fuses could cause equipment damage or failure and could void your warranty.*

4) Cigarette Lighter Plug:

Connects directly into a standard automotive cigarette lighter receptacle. Simply plug the PowerVerter in to operate.

5) Cooling Fan:

PV 300 features a fan to maintain internal cooling.



4 • OPERATION

4.1 Operation Overview

The PowerVerter Ultra Compact Inverter can be used either with your vehicle's engine off or running. Depending on the amount of equipment connected to the PowerVerter, a typical vehicle battery will provide 2 to 3 hours of runtime on average (or as long as 10 hours under optimum conditions) before needing to be recharged.

Since the PowerVerter merely converts electrical energy (and does not produce it), the voltage and capacity it provides your equipment depends on the voltage and capacity provided by your vehicle's battery.

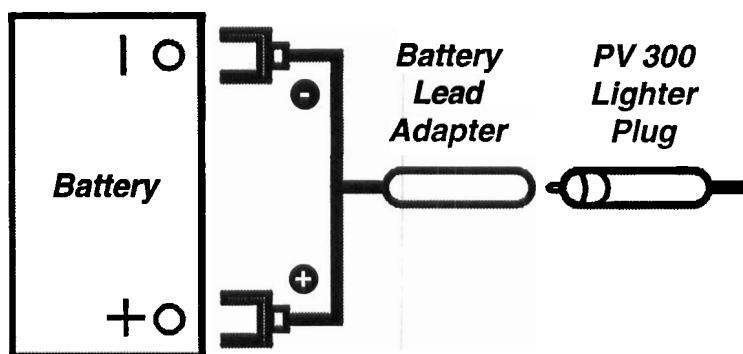
The PowerVerter produces a Modified Sine Wave that closely matches the sine wave produced by the utility company that serves your household, making it far superior to other inverters on the market. This makes it ideal to power appliances and equipment you commonly use at home.

4.2 Step-By-Step Operation

❶ **OBSERVE ALL PRECAUTIONS IN THE SAFETY SECTION ON PAGE 3** ❷ Place the PowerVerter on a convenient, flat surface in your vehicle ❸ Plug the PowerVerter's cigarette lighter plug into your vehicle's cigarette lighter receptacle ❹ Plug your equipment into the PowerVerter. Make sure that the equipment is turned OFF. If connecting over 240 watts to model PV 300, see Direct Connection Operation below. ❺ Turn ON the PowerVerter ❻ Turn ON your equipment

4.3 Direct Connection Operation (PV 300 only)

Connecting the PV 300's cigarette lighter plug (as described above) will support most of your equipment. However, if you plan on connecting more than 240 watts to the PV 300, you **MUST** connect the inverter directly to the battery. To connect the PV 300 directly to the battery, first purchase a Battery Lead Adapter available at most automotive stores. It consists of a cigarette lighter receptacle (that you plug the PV 300 into) and two battery leads (which you connect directly to the battery terminals) (See diagram at right). **CAUTION: OBSERVE POLARITY AT ALL TIMES. REVERSE POLARITY WILL BLOW THE PV 300'S FUSE AND MAY DAMAGE THE INVERTER'S INTERNAL CIRCUITRY.**



⚠ Warning!

During direct connection to the battery there is a risk of sparks from the terminal igniting explosive battery gases that have built up. *Perform direct connection only in a well-ventilated area.*

5•TROUBLESHOOTING

5.1 Troubleshooting Guide

Please check the following *before* sending the PowerVerter in for service:

SYMPTOM	PROBLEM	CORRECTION
Inverter does not turn ON when ON/OFF switch is turned ON	Fuse is blown	Replace blown fuse. Check for possible inverter overload
Inverter is not able to power devices plugged into it	Battery running low	Recharge vehicle battery by running engine. Low battery voltage reduces inverter power output
	Power draw of equipment is too high for inverter output.	Check rated power draw of equipment. Make sure it does not exceed the maximum continuous output rating of the inverter
Inverter output seems intermittent	Loose connections	Check and secure all connections
Connected equipment experiences buzzing sound or picture distortion.	Audio/video interference	Reposition equipment antennas and PowerVerter

5.2 Maintenance

The PowerVerter requires no maintenance and contains no user-serviceable or replaceable parts (except for replaceable DC fuse)

5.3 Service

If you require service beyond what is explained in the Troubleshooting Guide, do the following:

Call Tripp Lite Customer Support at (312) 755-5401. [Outside the U.S., call (312) 755-5402]. Explain your problem and a technical support person will either remedy the problem over the phone or give you instructions about return, repair or exchange.

If returning your PowerVerter to Tripp Lite, please follow this procedure:

STEP 1: Carefully pack the PowerVerter using the ORIGINAL PACKING MATERIAL that came with the unit. Adequate packing is essential to ensure the inverter is not damaged in transit.

STEP 2: Enclose a letter describing the symptoms of the problem. This will help speed turn-around time.

STEP 3: If the PowerVerter is within the 1-year domestic (120-days export) warranty period, enclose a copy of your sales receipt

STEP 4: Send the PowerVerter to:

TRIPP LITE; 418 W. ILLINOIS; CHICAGO, IL 60610 USA; ATTN: REPAIR DEPARTMENT

6 • WARRANTY

1-YEAR LIMITED WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of 1 year from the date of initial purchase. If the product should prove defective in material or workmanship within that period, Seller will repair or replace the product, in its sole discretion. Service under this Warranty can only be obtained by your delivering or shipping the product (with all shipping or delivery charges prepaid) to: Tripp Lite, 418 W. Illinois, Chicago, IL 60610. Seller will pay return shipping charges. Call Tripp Lite Customer Service at (312) 755-5401 before sending any equipment back for repair.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY OR FITNESS, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES. (Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may have other rights which vary from jurisdiction to jurisdiction).

TRIPP LITE; 500 N. ORLEANS; CHICAGO, IL 60610

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes no representation or warranty as to the suitability or fitness of these devices for any specific application.

Policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice.

7•SPECIFICATIONS

Model:	PV140	PV300
Output Power (Maximum Continuous Watts):	140	300
Output Power (Peak Watts):	200	500
Nominal Input Voltage (DC):	12V	12V
Nominal Output Voltage (AC):	120V	120V
Output Waveform:	Modified Sine Wave	Modified Sine Wave
Low Battery-Voltage Alarm (Volts):	11.2V	11.4V
Low Battery-Voltage Shutdown (Volts):	10.4V	9.8V
AC Outlets (NEMA 5-15R):	1	2
Circuit Protection (DC Overload):	20 amp fuse	30 amp fuse
Dimensions (HxWxD):	1-3/4 x 3 x 6 in. 4.4 x 7.6 x 15.2 cm.	1-4/5 x 4-1/5 x 6 in. 4.6 x 10.7 x 15.2 cm.
Weight:	1-1/5 lbs. (.54 kg.)	2 lbs. (.91 kg.)

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